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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,195	10/24/2003	Randall R. Geib	0241-P03282US0	2326

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DANN, DORFMAN, HERRELL & SKILLMAN  
1601 MARKET STREET  
SUITE 2400  
PHILADELPHIA, PA 19103-2307

EXAMINER
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GARCIA, ERNESTO

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/693,195

**Applicant(s)**

GEIB, RANDALL R.

**Examiner**

Ernesto Garcia

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2003 and 10 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/10/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to because the cross section view of the chamfered surface (unreferenced) of the flange 55 is not shown accurately. See attachment of marked-up Figure 2 to find the cross section view as correctly fixed by the examiner.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended". If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the limitations “a first connector” recited in line 3 of claim 1, “a second connector” recited in line 11 of claim 1, and “circumferential interlock” recited in line 17 of claim 9 lack proper antecedent basis in the specification.

### ***Claim Objections***

Claims 1, 9, and 11 are objected to because of the following informalities:

regarding claim 1, “threads” in line 3 should be --a thread--, and “threaded portion” in line 22 should be --thread--;

regarding claim 9, “threads” in line 3 should be --a thread--, “tapered” in line 13 should be --frustoconical--, the first occurrence of “threads” in line 18 should be --thread--, and the second occurrence of “threads” in line 18 should be --threaded portion--; and,

regarding claim 11, “outer sleeve” should be --the external surface--. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7, and 9-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 7, it is unclear whether "a plurality of slots" in line 2 is identical to the slot recited in line 9 of claim 1 or different slots than the slot recited in line 9 of claim 1.

Regarding claim 9, there is an inconsistency between the language in the preamble and a certain portion in the body of the claim, thereby making the scope of the claims unclear. The preamble clearly indicated that the device is "for coaxially mounting a machine element having a bore upon a shaft". However, the body of the claim positively recites "the machine", e.g., "an outer sleeve engaging the machine element" (line 12), which indicates the claims as being drawn to a combination of the "device" and the "machine element". Therefore, applicant must clarify what the claims are intended to be drawn to, i.e., either the "device" alone or in combination with the "machine element", and present the claims with the language, which is consistent with the invention.

Regarding claims 10-14, the claims depend from claim 9 and therefore are indefinite.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9, 10, 13, and 14-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Muellenberg, 5,067,847 (see marked-up attachment).

Regarding claim 9, Muellenberg discloses, in Figures 3 and 11, a device, in combination with a machine element **3** having a bore **4**, comprising a one-piece inner sleeve **10**, a nut **30**, and an outer sleeve **20**. The inner sleeve **10** has a forward end **A15** and a rearward end **A31**. The inner sleeve **10** comprises a threaded portion **8**, a frustoconical external surface **6** and an internal bore **5**. The frustoconical external surface **6** has a major diameter **A35** adjacent the threaded portion **8** and a minor diameter **A14** spaced from the major diameter **A35** toward the forward end **A15** of the inner sleeve **10**. The nut **30** has a thread **15** at one end **A25** and a circumferential flange **13** at a distal end **A34**. The outer sleeve **20** engages the machine element **3** and

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the outer sleeve **20** has a forward end **A8** and a rearward end **A37**. The outer sleeve **20** comprises a frustoconical interior surface **12**, an exterior surface **12** and a circumferential interlock **13**. The frustoconical interior surface **12** correspond in angle of taper to the frustoconical external surface **6** of the inner sleeve **10**. The frustoconical interior surface **12** has a major diameter **A9** and a minor diameter **A7**. The major diameter **A9** is adjacent the rearward end **A31** and the minor diameter **A7** is adjacent the forward end **A8**. The exterior surface **12** corresponds to the bore **4** of the machine element **3**. The circumferential interlock **13** engages the flange **13** of the nut **30**.

Regarding claim 10, the flange **13** extends radially outwardly and the nut **30** further comprises an annular **16** adjacent the flange **13**. The outer sleeve **20** is a one-piece sleeve having sufficient resilience.

Regarding claim 13, the outer sleeve **20** comprises a stop **A29**.

Regarding claim 14, end **A45** of the inner sleeve **10** is continuous about the circumference.

Regarding claim 15, given the structure of Muellenberg above, the method is inherently performed. Therefore, the method comprises:

provide an inner sleeve;

provide an outer sleeve;

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provide a nut;

connect the outer sleeve to the nut;

position the inner sleeve and the outer sleeve between a shaft and a bore of a machine element; and,

rotate the nut in a forward direction. At the outset, it should be noted that in method claims, it is the patentability of the method steps that is to be determined and not the recited structure. Structure not affected in the manipulation sense is given no patentable weight.

Regarding claim 16, the rotating the nut in the forward direction drives the inner sleeve through a minor diameter.

Regarding claim 17, the step of connecting the outer sleeve to the nut comprises:

drive the outer sleeve toward the nut.

Regarding claim 18, at the outset, it should be noted that in method claims, it is the patentability of the method steps that is to be determined and not the recited structure. Structure not affected in the manipulation sense is given no patentable weight. Therefore, the outer sleeve resiliently displaces radially.



***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muellenberg, 5,067,847 (see marked-up attachment), in view of Geib, 6,361,243.

Regarding claim 1, Muellenberg discloses, in Figures 3 and 11, a device comprising a nut **30**, an outer sleeve **20**, and an inner sleeve **10**. The nut **30** has a thread **15** and a first connector **16**. The outer sleeve **20** comprises an external surface **12**, a tapered internal surface **11**, at least one axial slot **A10** (col. 4, lines 62-64) and a second connector **13**. The tapered internal surface **11** has a minor diameter **A7** adjacent a forward end **A8** of the outer sleeve **20** and a major diameter **A9** spaced rearwardly from the forward end **A8**. The axial slot **A10** extends longitudinally along the outer sleeve **20**. The second connector **13** cooperates with the first connector **16**. The inner sleeve **10** comprises a tapered external surface **6** corresponding in angle of taper to the tapered internal surface **11** of the outer sleeve **20**. The inner sleeve **10** has a minor diameter **A14** adjacent a forward end **A15** of the inner sleeve **10** and a major diameter **A35** spaced rearwardly from the forward end **A15** of the inner sleeve **10**. The

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inner sleeve **10** has a threaded portion **8** remote from the forward end **A15** of the inner sleeve **10** and cooperates with the thread **15** of the nut **30**.

However, Muellenberg fails to disclose the external surface **12** being a tapered external surface **12**. Geib discloses an external surface of an outer sleeve **22** having being tapered thus a tapered external surface to correspond to a bore of a machine element (col. 2, lines 36-39). Therefore, as taught by Geib, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the external surface **12** tapered thus a tapered external surface to correspond to a tapered bore of a machine element.

Regarding claim 2, the outer sleeve **20** comprises axial slots **A10** extending longitudinally along the outer sleeve **20**. The axial slots **A10** provide sufficient radial flexibility.

Regarding claim 3, the first connector **16** comprises a circumferential groove **16** and the second connector **13** comprises a flange **13** extending radially inwardly. The outer sleeve **20** is sufficiently resilient such that the outer sleeve **20** contracts.

Regarding claim 4, as modified above, the tapered external surface **12** of the outer sleeve **20** will have a minor diameter. The nut **30** has an external diameter **A22** greater than the minor diameter of the external surface **12** of the outer sleeve **20**.

Regarding claim 5, the external surface **12** of the outer sleeve **20** has a major diameter **A23** and the outer sleeve **20** comprises an external flange **13** extending radially outwardly adjacent the major diameter **A23** of the external surface **12** of the outer sleeve **20**.

Regarding claim 6, one end **A55** of the inner sleeve **10** is continuous about the circumference.

Regarding 7, the outer sleeve **20** is a one-piece sleeve comprising a slot **A18** (col. 4, lines 62-64) forming a section connected by a web **A28**. However, Muellenberg fails to disclose the slot **A10** being a plurality. Geib teaches, in Figure 1, a one-piece sleeve comprising a plurality of slots **27** to provide sufficient flexibility of an outer sleeve **21**. Therefore, as taught by Geib, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make more than one slot on the outer sleeve to provide sufficient flexibility of the outer sleeve.

Regarding 8, the outer sleeve **20** comprises a stop **A29**.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muellenberg, 5,067,847 (see marked-up attachment), in view of Geib, 6,361,243, and further in view of Stegeman et al., 5,308,183.

Regarding claim 11, Muellenberg, as discussed above, fails to disclose the outer sleeve (*vis.* the external surface) comprising a frustoconical external surface having a minor diameter adjacent the forward end **A8** of the outer sleeve **20** and a major diameter spaced rearwardly from the minor diameter. Stegeman et al. disclose, in Figure 2, the external surface comprising a frustoconical external surface having a diameter spaced rearwardly from the minor diameter adjacent a forward end of an outer sleeve 22 and a major diameter spaced rearwardly from the minor diameter to engage a tapered bore in a machine element 14. Therefore, as taught by Stegeman et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the external surface **12** a tapered external surface to engage a tapered bore in the machine element.

Regarding claim 12, given the modification above, the nut **30** has an external diameter **A22** greater than the major diameter of the external surface **12**.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 703-308-8606. The examiner can normally be reached from 9:30-6:00. The fax phone numbers

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for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 703-308-2686. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*ES*

*Daniel P Stodola*

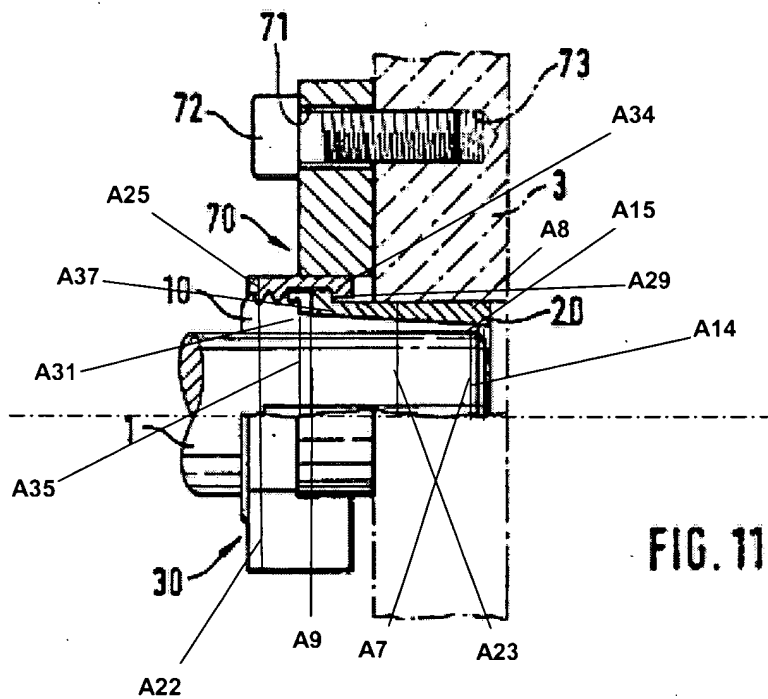
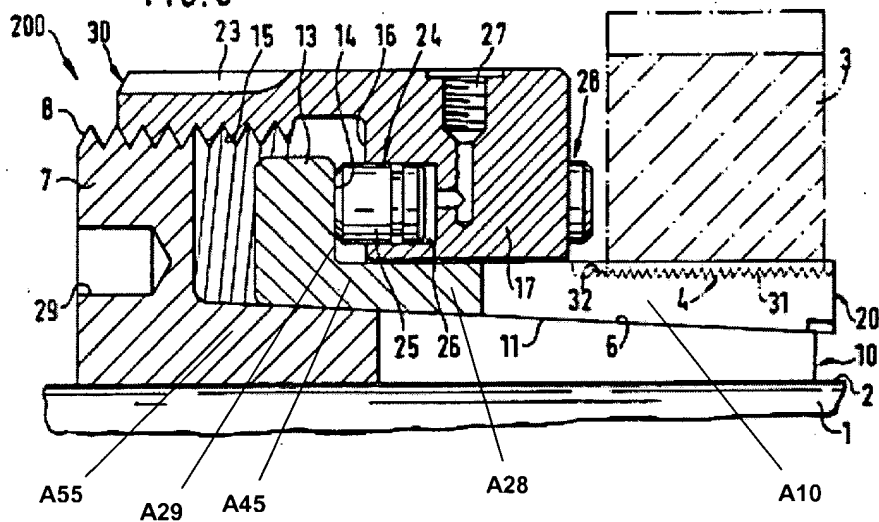
E.G.

February 16, 2005

DANIEL P. STODOLA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600

Attachments: one marked-up page of Muellenberg, 5,067,847; and,  
one marked-up page of applicant's Figure 2.

FIG. 3



**FIG. 11**

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Applicant's Marked-up Figure 2

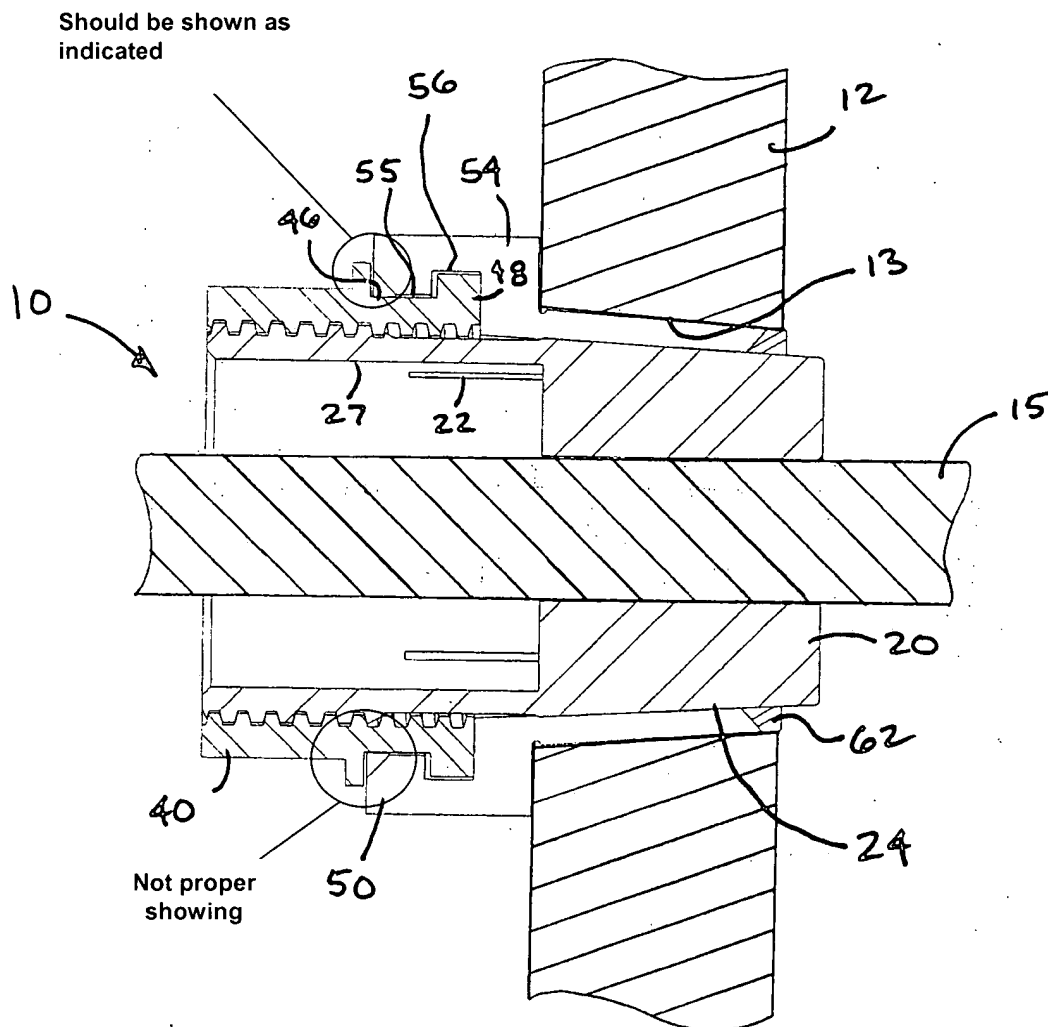


FIG. 2